BESTip ATA 10D

VoIP Gateway

User Manual

Projectek Networking Electronics Corp.

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http://www.iptelcom.com.tw

Please fill in the following ID no. which you can find it on the bottom of your BESTip ATA-10D. You may need it in the future.

Purchase Date: _____(1 year warranty)

ID no: _____

Model no: _____

Distributor: _____

Table of Contents

Chapter 1: Overview

Congratulations on your purchase of the BESTip! With the BESTip, you will capture the power of the Internet by using your existing network to communicate over the Internet, underline worldwide, free of long distance charges. The BESTip allows you to take advantage of the vast reach and cost reduction of the Internet for voice communication.

Lower Communication Charges

Reduced monthly phone charges are a big advantage of converging voice calls with the existing data network. BESTip can eliminate traditional circuit-switched networks, and save your company substantial amounts in long-distance charges. A BESTip network can quickly return your investment and begin paying you back.

For example, companies with overseas branches stand to reap the biggest rewards by eliminating international long-distance charges. A company with the headquater and branch located in Taipei and Los Angles could route calls to and from each office over the network, and thus a major portion of long-distance charges could be reduced.

Reduced Cost of Ownership

The lower cost associated with BESTip devices is not just to lower monthly fees. BESTip also reduces the amount of hardware needed (infrastructure overhead) by both converging voice and data networks. With BESTip, you do not need to replace your existing network connections, routers or phone systems. The BESTip is helping to drive down the total cost of business communications.

Supporting multiple telephony interfaces

The BESTip ATA 10D supports 1 analog FXS port for connecting to an existing analog telephone or other analog terminal and a dial-up interface for connecting to a home or office Local Area Network.

Integrating FXS and built-in modem in a single box, BESTip ATA 10D provides the users reliable and high quality voice communications only at a lower cost while compared to using PSTN.

Simplicity

With BESTip, you avoid the expense of replacing your existing network connections, routers or phone systems required by other VOIP solutions.

Simply plug your BESTip into a dial-up Internet Connection. Minimum requirements:

• Dial-up Internet Connection

• LAN connection

• IP addresses

User Friendly

The BESTip ATA 10D is a standalone device, and possesses its own processor and network interface. You can easily install your BESTip device for its software and configuration can be managed easily and securely. Just enter the IP addresses configuration into your BESTip with your phone keypads, dial the recipient's number on the telephone set, and you are ready to talk via Internet. In fact, placing calls with the BESTip is like using your existing phone system. All of the communication cost will be eliminated except a local Internet connection charge.

This manual gives you easy-to-follow instructions for installing and using the BESTip ATA 10D.

For further details on these applications, please refer to http://www.iptelcom.com.tw/

Physical Description

This section provides physical description of BESTip ATA 10D.

Front Panel

There are five buttons on the front panel for quick and easy configuration.

- **LCD Display**
- **Green LED Power Signal**
- **Blue LED On-Line Signal**
- **UP Button**
- **DOWN Button**
- **OK Button**
- **NEXT Button**
- **BACK Button**

Rear Panel

There are three connectors on the rear panel to connect to the related devices. The description is listed below (left to right).

DC 12V   **FXS Phone**   **Line**

DC 12V	DC Adapter Connector: connects to the 12V DC power adapter.
FXS Phone	RJ-11 Connector: connects to a phone set.
Line	RJ-11 Connector: connects to the wall phone jack.

Chapter 2: Installation

This chapter indicates how to proprely connect your BESTip ATA 10D.

Package Contents

The package includes the following items:

■   A BESTip ATA 10D

■   A DC power adapter

■   A R-J11 phone cord

Requirements to Use BESTip

Before making an Internet call with your BESTip, you also need the following items:

■   A touch-tone phone set

■   A 110/220V AC electrical outlet

■   A valid Internet account

■   An analog phone line

Note: If you do not have a dial-up Internet account, please contact your local ISP.

Physical Installation

Follow the instructions for correct connection:

1. Unplug the phone from the wall-jack, and plug it into the RJ-11 jack labeled **FXS PHONE** on the back of BESTip.

2. Plug one end of the phone cord into the wall phone jack.

3. Plug the loose end of the cord into the R-J11 jack labeled **LINE** on the BESTip.

4. Attach the DC power adapter cord into the power connector of BESTip ATA 10D and a live power outlet.
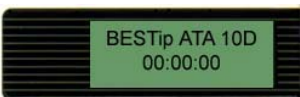
Hookup for BESTip ATA 10D
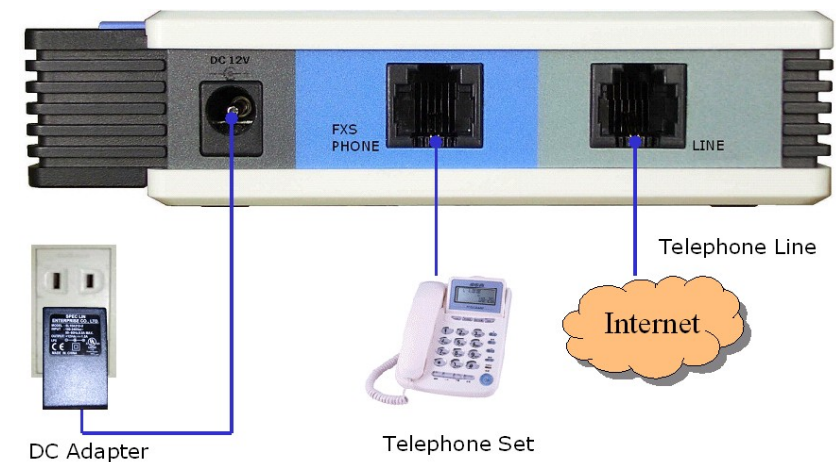
Chapter 3: Setup

After connecting the device, follow the steps below to setup the BESTip ATA 10D. You can modify the setting when the device is at working status.

Make sure the device is well connected. Please do not enter the setup mode until the device finishs booting.

How to Enter Setup Mode

1. After finishing the connection, the BESTip will start self-testing, and the LCD screen will display as shown right.	INITIALIZE _
2. After the system finishing initializing, the system will start up DSP.	Start Up DSP OK
3. For the first time, the LCD will display **Enter Setup Mode - Push Down=Yes**. Press ▼ DOWN button on the front panel to enter setup mode.	BESTip ATA 10D 00:00:00

Note: When the device finishes booting, you can always use ► NEXT or ◄ BACK to scroll the menu and press ▼ DOWN to enter the option you select.
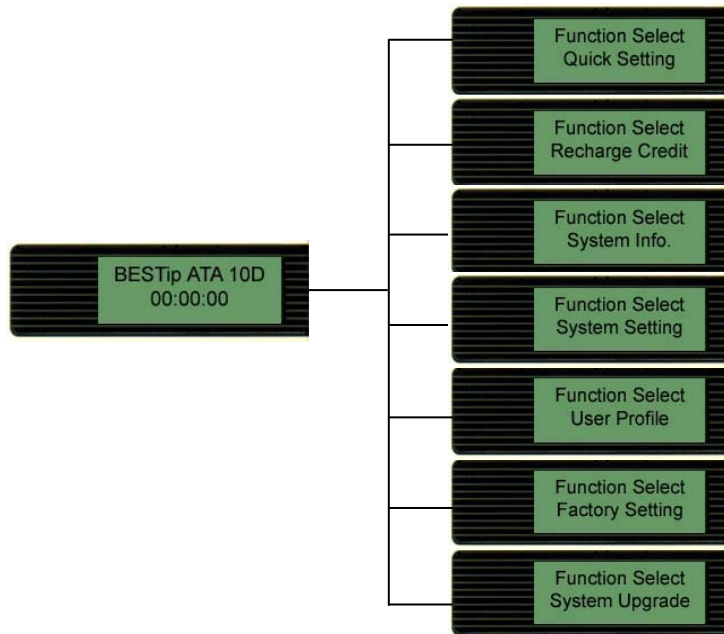
1. You can press "DOWN" button at standby status to enter main menu.

Press "Down" button to enter main menu.

2. Then, you can press "NEXT" or "BACK" button to scroll the menu.

Press "NEXT" button to scroll the menu.

Press "BACK" button to scroll the menu.
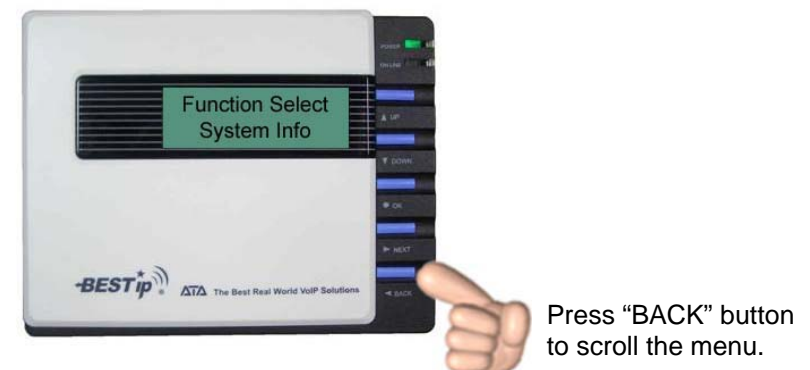
3. There are seven options in the **Function Select** menu.
The options are described in the following pictures.

4. You can press "UP" button to return to standby status.

Press "UP" button to return to standby status.

Using Buttons to Setup BESTip

You can use the buttons on the front panel of the BESTip and your telephone keypads to setup the BESTip. The functions of five buttons on BESTip are described below.

1. Suppose now you want to input the "Country Code" option under "Quick Setting" menu. Firstly, press "DOWN" button to enter "Function Select" menu.

Press "DOWN" button at standby status to enter "Function Select" menu.

2. Press "NEXT" or "BACK" button to select "Quick Setting" menu.

Press "NEXT" or "BACK" button to scroll the menu.

3. Press "DOWN" button to enter "Quick Setting" menu.

Press "DOWN" button to enter the menu.

4. Keep pressing "DOWN" button until you see "Country Code" option.

Keep pressing "DOWN" button until you see "Country Code" option.

5. To input "Country Code", press "OK" firstly and the title will start flashing. Then you are able to input data.

The title will start flashing

Press "OK" button to start to input data.

6. You can press "UP" or "DOWN" button to input data, please see the **Data Input Sequence** below. You can use "NEXT" or "BACK" button to select and erase the value.

(in the forward sequence) 1 2 3 4 5 6 7 8 9 0 . , @ _ % & = a A b B c C d D e E f F g G h H i I j J l L m M n N o O p P q Q r R s S t T u U v V w W x X y Y z Z (in the backward sequence)

The title is still flashing

Press "UP" or "DOWN" button to input the data.

Press "NEXT" or "BACK" button to select and erase the value.

7. You can also use the keypad on the touchtone phone to input the necessary data. **Remember to pick up the phone handset while using the phone keypad to input data**. Please refer to the Typical Phone Keypad and Configuration Sheet below to enter character.

Typical Phone Keypad
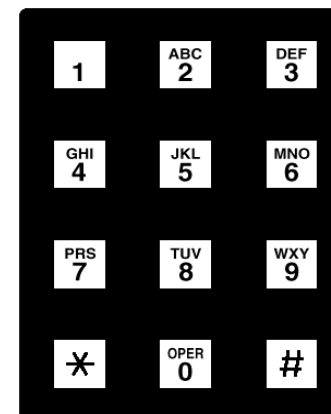
Configuration Sheet

KEY PAD	Character Set
1	1 - =!#$%^&_+|:"<>?\;'/
2	2 abcABC
3	3 defDEF
4	4 ghiGHI
5	5 jklJKL
6	6 mnoMNO
7	7 pqrsPQRS
8	8 tuvTUV
9	9 wxyzWXYZ
0	0 .,@"space"*
*	.
#	#

8. After entering the value, press "OK" button again and the title will stop flashing. The new value has been stored in memory temporarily. You may go to the next setting.

The title will stop flashing

Press "OK" button again to stop inputting data and save the value temporarily.
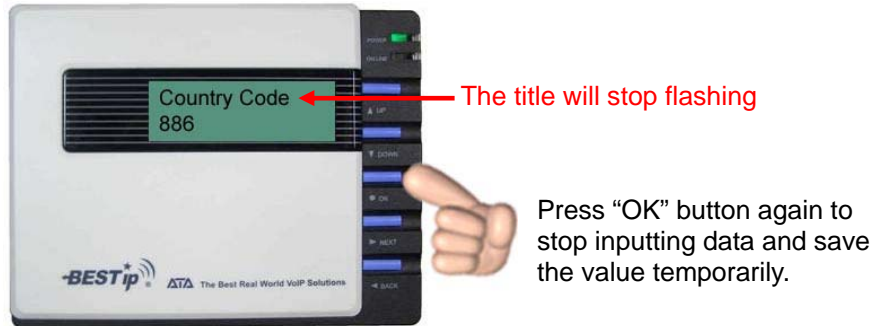
9. After finishing all the settings, please press "UP" button one or two times until the screen displays "Update Setup" as following picture. All the setting will be saved permanently.
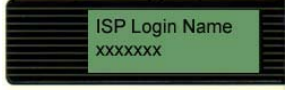

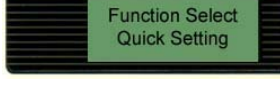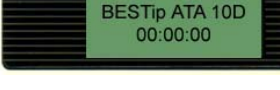Press "UP" button 1 or 2 times until the screen displays "Update Setup".
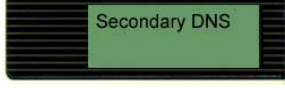
10. It will return to standby status automatically after the configuration data has been saved. Please refer to the following chapters to setup your BESTip ATA 10D.
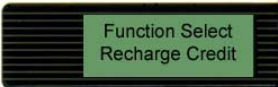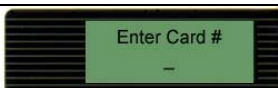
Function Select－Quick Setting

You can always set the data of the device in the **Quick Setting** menu.

Press ▼ DOWN to enter the **Function Select** Mode. Press ▼ DOWN button to enter **Quick Setting**.	Function Select Quick Setting
PBX Dial Prefix: Please enter the PABX dial prefix if the ATA is connected to PBX.	PBX Dial Prefix X
ISP Phone: Please enter your ISP phone number.	ISP Phone xxxxxxx
Login Name: Please enter your loign name for dial-up Internet access.	ISP Login Name xxxxxxx
Password: Please enter your login password for dial-up Internet access.	ISP Password xxxxxxx
PPP Type: Use ► NEXT or ◄ BACK to selcet the PPP type. Normally set to "Type 1".	ISP PPP Type Type 1
Primasy DNS: Set the primary DNS if necessary.	Primary DNS
Secondary DNS: Set the secondary DNS if necessary	Secondary DNS

ISP IdleTimeout : This mode allows auto disconnection from the Internet when no action detected continues a period of time. "0" means always online.	ISP Idle Timeout 0
Country Code: Please enter your country code.	Country Code xx
Area Code: Please enter your area code.	Area Code xx
IDD Prefix: Please enter the International Direct Dial code. "00" for example.	IDD Prefix 00
DDD Prefix: Please key in the Domestic Direct Dial code. "0" for example.	DDD Prefix 0
Press ▼ DOWN to back to the **Quick Setting** menu.	Function Select Quick Setting
Press ▲ UP 1 or 2 times to save configuration data in memory.	Update Setup Please Wait...
The standby screen will show again after the configuration data has been saved.	BESTip ATA 10D 00:00:00

Function Select－Recharge Card

You may top up your ITSP account with recharge card. Please ask local distributor for more detail.

1. Press ▼ DOWN button to enter the **Function Select** Mode. Press ► NEXT or ◄ BACK to scroll the main menu till it appears **Recharge Credit**.	Function Select Recharge Credit
2. Press ▼ DOWN to enter **Recharge Credit Go?** Press ▼ DOWN again to confirm.	Recharge Credit GO ?
3. BESTip ATA 10D will dial ISP automatically and connect to Internet.	Dial ISP _
4. Once Internet Connection is established, then **Enter Card #** will show. Press ● OK one time, the title will start flashing. Please enter the card number. Press ● OK again, and the title will stop flashing. New value has been stored temporarily.	Enter Card # _
5. Press ▼ DOWN to enter **Enter PIN-CODE.** Follow the same way as in **step 4** to enter the code.	Enter PINCODE _
6. Press ▼ DOWN button to confirm. **Start Recharge** will shows. The process will take a few minutes.	Start Recharge Please Wait_
8. When recharge finished, the total amount will be shown on the display.	New Credit XXX Points
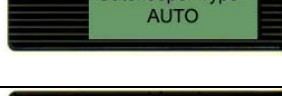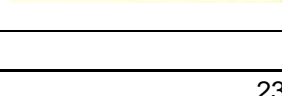
Function Select－System Info
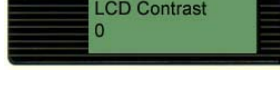
You can always consult the system information of your ATA in the **System Info** menu.

Press ▼ DOWN to enter the **Function Select** Mode. Press ► NEXT or ◄ BACK to scroll the main menu till it appears **System Info**. And then press ▼ DOWN to enter the option. There are two options in the **System Info** menu: **Device ID** and **Software Version**.	Function Select System Info.
Device ID: Each ATA unit owns an 7-digits ID number. It is the number for other BESTip users to reach you over Internet. Please inform those who use BESTip product your ID number to call each other.	Device ID 51000000
Software Version:It displays the current firmware version of your device.	Software Version 1.47A (AC488)

Function Select－System Setting

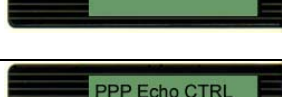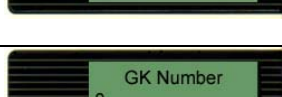|	
Press ▼ DOWN to enter the **Function Select** Mode. Press ► NEXT or ◄ BACK to scroll the main menu till it appears **System Setting**. And then press ▼ DOWN to enter the option.	Function Select System Setting
Country Code:Please key in the local Country Code.	Country Code xx
Area Code: Please enter the local Area Code.	Area Code xx

IDD Prefix: Please enter the International Direct Dial code.	IDD Prefix 00
2nd IDD Prefix: Please enter the secondary International Direct Dial code. Leave it blank unless you are in USA.	2nd IDD Prefix
DDD Prefix: Please key in the Domestic Direct Dial code.	DDD Prefix 0
Play Volume: The default value is 0dB.You can adjust from -31dB to 31dB.	Play Volume 0 dB
Record Volume: The default value is 0dB. You can adjust from -31dB to 31dB.	Record Volume 0 dB
Gatekeeper Type: "AUTO" for most cases.	Gatekeeper Type AUTO
Modem Commands: Normally leave it blank.	Modem Commands
Modem Country: You can enter the country where the modem is located. "Taiwan" for example.	Modem Country
PPP Echo CTRL: Normally set to "OFF".	PPP Echo CTRL OFF
GK Number: Normally Set to "0".	GK Number 0

Show CDR: CDR will be shown on the display after call finished if you turn it on.	Show CDR OFF
Polarity Reverse: Normally set to "OFF" unless your device is applied for business purpose.	Polarity Reverse OFF
LCD Contrast: The default value is 0dB.You can adjust from +5~-10	LCD Contrast 0

Function Select－User Profile

1. Press ▼ DOWN button to enter the **Function Select** Mode. Press ► NEXT or ◄ BACK to scroll the menu till it appears **User Profile**. Press ▼ DOWN to enter the option.	Function Select User Profile
2. There are four options in the **User Profile** menu: **New, Modify, Select** and **Erase**.	

User Profile－New

1. Press ► NEXT or ◄ BACK to scroll the **User Profile** menu till it appears **New**. And then press ▼ DOWN to enter the option.	User Profile New
2. Pick up your handset. Key in the ISP name using the character converter chart stated prior in this chapter. Press ▼ DOWN to save.	Name

3. Enter the ISP phone number. Press ▼ DOWN to save.	ISP Phone xxxxxxx
4. Enter the login name. Press ▼ DOWN to save.	Login Name
5. Enter the login password. Press ▼ DOWN to save.	Login Password
6. Press ► NEXT or ◄ BACK to selcet the PPP type. Press ▼ DOWN to save.	ISP PPP Type Type 1
7. Enter the primary DNS. Press ▼ DOWN to save.	Primary DNS
8. Enter the secondary DNS. Press ▼ DOWN to save and back to the upper menu.	Secondary DNS

User Profile－Modify

1. Press ► NEXT or ◄ BACK to scroll the **User Profile** menu till it appears **Modify**. Press ▼ DOWN to enter the option.	User Profile Modify
2. Use ► NEXT or ◄ BACK to find the target user profile to modify. Press ▼ DOWN to confirm.	Modify XXX

3. Pick up your handset. Modify the ISP name. Press ▼ DOWN to save.	Name
4. Modify the ISP phone number. Press ▼ DOWN to save.	ISP Phone xxxxxxx
5. Modify your login name. Press ▼ DOWN to save.	ISP Login Name xxxxxxx
6. Modify the login password. Press ▼ DOWN to save.	Password xxxxxxx
7. Use ► NEXT or ◄ BACK to select the PPP type. Press ▼ DOWN to save.	ISP PPP Type Type 1
8. Modify the primary DNS. Press ▼ DOWN to save.	Primary DNS
9. Modify the secondary DNS. Press ▼ DOWN to save and back to the upper menu.	Secondary DNS

User Profile－Select

1. Press ► NEXT or ◄ BACK to scroll the **User Profile** menu till it appears **Select**. And press ▼ DOWN to enter the option.	User Profile Select
2. Press ► NEXT or ◄ BACK to select your target ISP name. Press ▼ DOWN to save and back to the upper menu.	Select XXX

User Profile－Erase

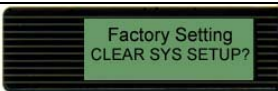|	
1. Press ► NEXT or ◄ BACK to scroll the menu till it appears **Erase**. And press ▼ DOWN to enter the option.	User Profile Erase
2. Press ► NEXT or ◄ BACK to select the ISP you want to erase. Press ▼ DOWN to confirm and back to the upper menu.	Erase XXX

Function Select－Factory Setting

BESTip has the auto-recovery capability. Just follow the steps below back to default factory settings.

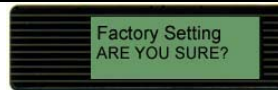**Note**: Before proceeding, be sure that your BESTip is connected to the Internet.

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1. Press ▼ DOWN to enter the **Function Select** mode. Press ► NEXT or ◄ BACK to scroll the main menu till it appears **Factory Setting**. Press ▼ DOWN to enter the option.	Function Select Factory Setting
2. There are six options of **Factory Setting: CLEAR SYS SETUP, CLR PHONE BOOK, ISP #1 SETUP, ISP #2 SETUP, ISP #3 SETUP, ISP #4 SETUP, ISP #5 SETUP and ISP #6 SETUP**. Press ● OK or ► NEXT to select the option. Press ▼ DOWN to start the process.	

Factory Setting－Clear System Setup

1. Press ▼ DOWN to enter the option.	Factory Setting CLEAR SYS SETUP?

2. Press ● OK to confirm the proceeding.	Factory Setting ARE YOU SURE?

Factory Setting－Clear Phone Book

1. Press ▼ DOWN to enter the option.	Factory Setting CLR PHONE BOOK ?
2. Press ● OK to confirm the proceeding.	Factory Setting ARE YOU SURE?

Factory Setting－Clear ISP Setup

1. Press ► NEXT or ◄ BACK to select the target ISP setup to clear, and then press ● OK to enter the option.	Factory Setting ISP #1 SETUP ?
2. Press ● OK to confirm the proceeding.	Factory Setting ARE YOU SURE?

Function Select – System Upgrade

To ensure the users always have the latest Internet telephony technologies, the BESTip offers online upgrade feature.

BESTip can be upgraded whenever a new software version becomes available. Upgrades can enhance the performance and add more features to your BESTip.

Note: Before proceeding to upgrade, be sure that your BESTip is connected to the Internet.

To upgrade your BESTip with the latest software version, follow the followign instructions. The process will take 5 minutes or so depending on the Internet traffic.

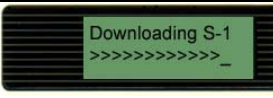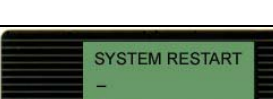|	
1. Press ▼ DOWN button to enter the **Function Select** Mode. Press ► NEXT or ◄ BACK to scroll the main menu till it appears **System Upgrade**. And then press ▼ DOWN to enter the option.	Function Select System Upgrade
2. Press ▼ DOWN to start the the process of software upgrade.	System Upgrade Software Upgrade
3. Press ● OK to confirm the process.	Software Upgrade GO ?
4. BESTip ATA 10D will dial ISP automatically and connect to Internet.	Dial ISP _
5. Once Internet Connection is established, BESTip ATA 10D will connect to the Server and the screen will show the downloading progress.	Downloading S-1 >>>>>>>>>>>>_
6. It will take about 3~5 minutes to finish downloading depending on the network traffic. If the new software version is downloaded successfully, BESTip will reboot itself automatically.	SYSTEM RESTART _
Please do not power off the device any time during software upgrad is in progress, otherwise the device may not boot properly.	

Chapter 4: To Make an Internet Call

After having finished the setup in Chapter 3, you are ready to make calls with your BESTip. Refer to the illustration below the connection of your BESTip.

BESTip provides two modes of voice communication: BESTip-to-Phone and BESTip-to-BESTip modes. Both allows users to save greatly on long-distance and international calls.

Hookup for BESTip ATA 10D
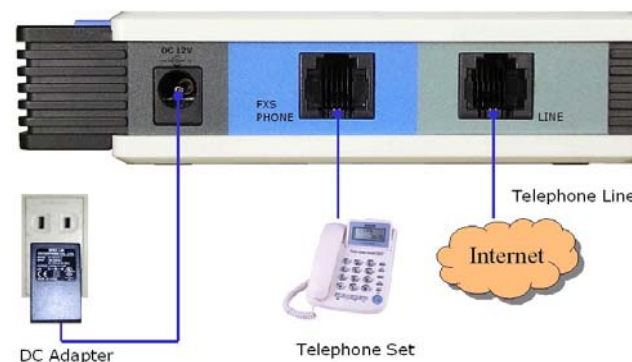
Note: A crossover network cable may be required when connecting to ADSL Modem.

Testing Before Making a Call

After finishing the connection and configuration of your BESTip, be sure the BESTip is turned on and well connected. Please wait till BESTip finishes booting before making calls.

1. BESTip will start self-testing, and the LCD screen will display as shown right.	INITIALIZE _

2. Once the system testing finishes, it will go for standby status.	BESTip ATA 10D 00:00:00
3. Please press ▲ UP to dial ISP to establish Internet connection.	Dial ISP _
4. Once Internet connection is established, you will see **Blue LED On-Line signal** will be on. The display will show the balance and the message "**Ready for Dial**" as well.	Point xxx Ready for Dial

Pick up your telephone handset now, a ready tone can be heard. The basic installation is finished successfully. You may make VoIP calls now.

To Make a BESTip-to-BESTip Call

If the receiver you call is equipped with an BESTip, you may enter the IP address directly and talk to the remote BESTip receiver.
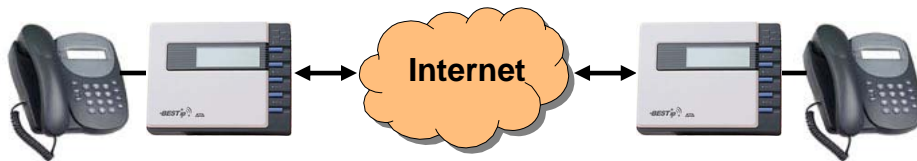
1. Make sure that the receiver you want to call is equipped with an BESTip connected to the Internet.

2. Pick up the handset, and you will hear a ready tone. Dial the ID No. of the receiving party and ended with a # key.

Note: Every BESTip has a unique eight-digit ID number found at the bottom of the device.

For example： The ID number of the receiving party is 19990023, so you need to dial 19990023#.

3. Hold the handset, and wait for the connection. You will hear a ringback tone indicating that your remote BESTip is ringing. Otherwise, you will hear a busy tone if your remote BESTip user is on the phone.

4. Once the connection is established, you can enjoy your communication with your receiving party.

5. Hang up the phone once the conversation is done. ATA 10D will remains online. You can make new calls or press ▼ DOWN to shut down the Internet connection.

To Make a BESTip-to-Phone Call

With Internet Telephony Service Provider (ITSP) service, BESTip is able to connect to PSTN lines. Having an active ITSP account, you can call all the world any time with low rates. Please contact our local distributor to recharge your device account.

In this mode, the receiver can answer an Internet phone call with a regular phone.
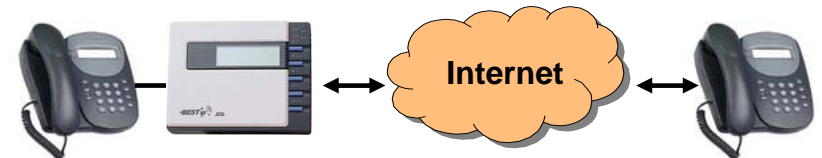
1. Press ▲ UP button, and ATA will start connecting to the Internet.

Dial ISP
_

2. Once the Internet connection is built successfully, the display will show the balance and the message "**Ready for Dial**" as well.

```
Point xxx
Ready for Dial
```

3. Pick up the handset and a ready tone can be heard. Please dial the destination number in the following manner:

For Domestic Long-Distance Calls

[Long-distance code] + [Area code] + [Telephone number] + #

For International Calls

[International code] + [Country code] + [Area code] + [Telephone number] + #

4. Hold the handset and wait for the connection.

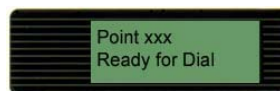**5.** Once your receiving party picks up the phone, you can enjoy the communication.

6. Hang up the phone once the conversation is done. ATA 10D will remains online. You can make new calls or press ▼ DOWN to shut down the Internet connection.

To Receive a BESTip Call

Once your BESTip is connected to the Internet, you may accept the calls from other BESTip. You cannot receive calls only when you are in the BESTip Setup mode.

Appendix A: Specifications

Interface

Telephone Interface	RJ-11 port, 1 x FXS for phone set
Line Interface	RJ-11 port, FXO for built-in 33.6K modem
Display	16x2 lines LCD display 2 LED Power and ON LINE
Switch button	5 buttons

Voice Codec

Channel Capability	1 Channels
Voice Codecs	ITU-T G.723.1 6.3 Kbps
Silence Compression VAD/CNG	ITU-T G.723 Annex A
Echo Canceller	ITU-T G.168-2000 Compliant
Signaling	DTMF(TIA464B), Call progress and user defined tone pairs
Input/output Gain	Programmable

Software/ Hardware

CPU	Embedded High Performance 100MHz 16-bit CPU
Memory	8Mb FLASH ROM, 16Mb SDRAM
DSP Chip Set	High Quality/Performance DSP for Voice compression
WAN Interface	Built-in 33.6K Analog Modem
Front Control Panel	16 characters x 2 Lines LCD,

	5 Push Button Switches
Operating System	Embedded Real-Time Operating System
Networking Protocol	IP, TCP, UDP, PPP, PAP, CHAP, DNS
Front Panel Self-Configuration function	Configure BESTip ATA 10D through front panel. No additional software or hardware required
Voice Over IP Gateway Protocol	BESTip Gateway Protocols Only 10k bps bandwidth is required when using G.723.1 6.3K codec

Physical

Power	12VAC, 0.6A External Power Supply
Environmental	Operational : 0 to 45°C Storage : -10 to 70°C Humidity: 10 to 90% non-condensing
Dimensions	128 x 88 x 27 mm (W/D/H)
Weight	300 g Approx.

Note: Specifications may subject to change without prior notice.